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THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

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Appellants	: David C. Loda	
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Alexandria, VA 22313

RESPONSE TO NON-COMPLIANT APPEAL BRIEF UNDER 37 C.F.R. §41.37(c)(1)(v)

SIR:

In response to the Notification of Non-Compliant Appeal Brief under 37 C.F.R. §41.37 dated July 20, 2006, having a shortened statutory period for reply set to expire on August 20, 2006, which falls on a Sunday, and is extended to August 21, 2006 under 37 C.F.R. §1.7, Applicants submit a concise explanation of all independent claims, referring to the specification by page and line numbers as needed, in compliance with 37 C.F.R. §41.37(c)(1)(v).

SUMMARY OF CLAIMED SUBJECT MATTER

In one aspect of Appellant's disclosure, an integrated system (Appellant's specification, page 3, line 11-page 10, line 30) broadly comprises a portal (Id., page 5, line 29-page 6, line 22); a server (Id., page 3, line 29-page 6, line 10) communicating with the portal; at least one wireless local area network (Id., page 4, line 8-page 5, line 10) in communication with the server; at least one mobile device (Id., page 4, line 24 - page 5, line 28) in wireless communication with the at least one wireless local area network; and a means for enabling two-way communications between the portal and the server (Id., page 3, line 11-page 10, line 30).

In another aspect of Appellant's disclosure, a method for providing remote, interactive visual analysis of an apparatus (Id., page 3, line 11-page 10, line 30) broadly comprises the steps of providing a portal (Id., page 5, line 29-page 6, line 22), the portal in communication with at least one electronic device (page 4, lines 12-22; page 7, lines 1-15); providing a server (Id., page 3, line 29-page 6, line 10) in two-way communication with the portal via the internet; integrating the server into a wireless local area network (Id., page 4, line 8-page 5, line 10); connecting at least one mobile device (Id., page 4, line 24 - page 5, line 28) to the local area network; providing visual data from at least one visual device (Id., page 4, line 30-page 5, line 4) to the at least one mobile device; and receiving the visual data at the at least one electronic device.

Referring to the Figure, an integrated system is presented which is capable of remotely monitoring a deployed product, gathering data about the deployed product, and disseminating the data to interested parties (page 3, lines 11-14; See also Figure). Of particular note is the ability of system 10 to remotely acquire visual information pertaining to a deployed product, to allow for the remote viewing of such visual data, and to provide two-way communications between the viewer of such data and the instrument acquiring the data (Id., lines 14-19). The integrated system 10 is also capable of monitoring and restricting interested parties' access to its data, and can transmit command instructions from a remote viewer to alter the operation of the visual data acquiring instrument (Id., lines 19-23).

The integrated system 10 includes a server 22, where the term "server" refers to any and all devices capable of storing and disseminating data to at least one other electronic device, e.g., personal computers, microservers, and dedicated servers, (page 3, lines 26-29; page 4, lines 1-2). The server 22 may be provided with its own web address, a firewall, and security protocols known only to selected individuals, such as the manufacturer of the deployed product (page 3, lines 29-31). The server 22 may be deployed in a stationary structure such as the floor of a hangar or vehicle assembly plant (page 4, lines 3-5). The server 22 may also be located upon a moveable platform such as a boat, an airplane, a spacecraft, an automobile, a truck, or any other entity that is movable (Id., lines 5-8).

The server 22 is in communication with wireless LAN access point 20 to create a wireless local area network (LAN) 24 (page 4, lines 9-11). In operation, wireless LAN 24 establishes a perimeter about wireless LAN access point 20 (Id., lines 11-13). Electronic devices, including server 22, within the perimeter established by wireless LAN 24 may logon to wireless LAN 24 and communicate via wireless LAN 24 with other electronic devices similarly logged on to wireless LAN 24 (Id., lines 13-17). However, other examples of wireless LAN access point 20 include any and all devices which may be located remote from server 22, which can communicate with server 22, and which are capable of establishing wireless LAN 24 (Id., lines 20-23).

The server 22 may monitor the condition of and/or gather data about a deployed product in a number of ways, for example, via the wireless LAN 24 connected to a mobile device 26 (Id., lines 24-26). In a preferred embodiment, mobile device 26 is a wireless PC tablet capable of wireless communication with wireless LAN 24 (Id., lines 27-28). Mobile device 26 may be carried or otherwise moved while in communication with wireless LAN 24 and thereby maintain the ability to communicate with server 22 (Id., lines 29-31).

Attached to mobile device 26 may be a visual data device 32 that acquires visual data pertaining to a deployed product and communicates the data to mobile device 26 (Id., lines 31-34). In one embodiment, visual data device 32 is a borescope (page 4, line 34-page 5, line 1). In another embodiment, visual data device 32 is a stereo image lens capable of capturing and communicating stereo

images to mobile device 26 (page 5, lines 1-3). In a preferred embodiment, visual data device 32 communicates with mobile device 26 through connection 30 (Id., lines 4-5).

Configured as described, visual data device 32 acquires visual data about a deployed product, communicates the data to mobile device 26 whereby mobile device 26 communicates the data to server 22 via wireless LAN 24 (Id., lines 11-14).

The server 22 may be programmed in any suitable language known in the art to gather the data about the deployed product and present the data to interested parties in a desired format (Id., lines 15-18). For example, the server 22 may be used to host a web page which provides information about one or more deployed products (Id., lines 18-20). The web page may have a menu which allows an interested party to gain access to gathered data about a particular deployed product (Id., lines 20-22). The data about the deployed product(s) may be organized on the server 22 and presented in any desirable format or manner (Id., lines 23-25). The server 22 may also be programmed to allow an interested party to carry out diagnostic operations on the deployed product(s) and/or to issue commands to visual device 32 via wireless LAN 24 and mobile device 26 (Id., lines 24-28).

In accordance with the present invention, the server 22 is capable of being accessed by interested parties via a portal 12 and the Internet or world wide web (Id., lines 29-31). To this end, the server 22 may have a communications device, such as a modem, built within it to

allow communication between the server 22 and the portal 12 (page 5, line 31-page 6, line 1). The communication device may allow for radio frequency communications such as cellular communication, satellite communication, and/or wireless communication between the server 22 and the portal 12 (page 6, lines 1-4). In addition, communications between the server 22 and the portal 12 may be achieved by optical means such as an infrared link (Id., lines 4-6).

The portal 12 is hosted by an external server which may be any suitable server known in the art (Id., lines 7-8). The server hosting the portal 12 also has appropriate communication means associated with it to allow it to gain access to and be accessed by the server 22 (Id., lines 8-11).

The portal 12 may be provided with a number of software tools called gadgets to automatically analyze, organize, and sort the data which has been received from the server 22 (Id., lines 12-14). The data is preferably sorted so that different communities gain access to different portions of the data (Id., lines 14-16). For example, actual and potential customers of a vendor of a deployed product may form one community and have access to certain data, while support engineers and product designers may form a second community and have access to another form of the data (Id., lines 16-20). As can be seen from the foregoing discussion, the portal 12 offers great flexibility as to how and to whom the data is disseminated. One of the advantages to using the portal 12 is that its functionality can be carried out in a secure, user friendly, web-based environment (Id., lines 20-25).

Members of a particular community can log in by presenting an identification and/or a password and gain access to current information about a deployed product (Id., lines 25-28).

Another advantage to using the portal 12 is that it can be used to receive data from server 22 and to upload information and data to the server 22 (Id., lines 29-31). Thus, an engineer, in communication with portal 12, can remotely receive visual data pertaining to a deployed product captured by visual data device 32 as well as send information to the visual data device 32 (Id., lines 31-35).

With continued reference to the FIGURE, there is illustrated a plurality of exemplary electronic devices in communication with portal 12 which may be utilized to communicate with a visual device 32 via portal 12, server 22, wireless LAN 24, and mobile platform 26 (page 7, lines 1-5). For example, goggles 14 may be utilized by a viewer of visual data captured by visual data device 32 (Id., lines 5-7). Such goggles 14 may facilitate the viewing of monographic or stereoscopic visual data captured by a video borescope or stereo image lens respectively (Id., lines 7-9). Computer 16 may be any computing device capable of receiving data and displaying it, as for example on a computer screen, and issuing commands, as for example through a keyboard associated with computer 16 (Id., lines 9-13). In addition, a mobile computer 18, such as a tablet PC, may be used to send and receive data to and from visual data device 32 (Id., lines 13-15).

While described with respect to goggles 14, computer 16, and mobile computer 18, the present invention is broadly drawn to encompass any and all means of receiving and displaying visual information as well as issuing control commands to control the acquisition of such visual data (Id., lines 16-20). For example, other devices which may be used in communication with portal 12 to receive and display visual data include 3D auto-stereoscopic projection systems, and 3D goggles (Id., lines 20-23).

Having thusly described the interaction of the components comprising system 10, there is herein provided a preferred embodiment whereby the present invention may be employed and utilized (Id., lines 24-27). The present invention can provide a live video image from a visual data device 32, such as a standard borescope, directly connected to a mobile device 26 comprised of a wireless PC maintenance tablet (Id., lines 27-30). The wireless PC tablet can be carried around by a mechanic or the like and may serve as the mechanic's repository for work instructions, electronic manuals, and the like in a field or shop aerospace environment (page 7, line 30-page 8, line 2). The mechanic can thereby move freely about the work environment and position the borescope in desired proximity to a deployed product such as and aircraft engine under repair (page 8, lines 2-5). The wireless PC tablet is logged on to wireless LAN 24 and therefore communicates with server 22 (Id., lines 5-6). Server 22 has a unique IP address and is therefore accessible via the internet by portal 12 (Id., lines 6-8). As a result, sections of the PC tablet desktop (or the entire desktop) can be shared within the Portal architecture, consisting of portal 12 and

the electronic devices in communication with portal 12, to allow for remote viewing, collaboration, and control of the borescope equipment between the operator and remote persons, such as engineers, managers, and customers sitting at their work or home PCs from anywhere in the world via an ordinary web browser (Id., lines 8-16).

Alternatively, a web-based application could be used to directly control the borescope, provide the image, and allow for communications remotely via a web interface (Id., lines 17-19). The remote control borescope feature builds upon local software-based borescope controls developed and sold by Olympus America Inc. of Melville, New York, and the Internet eBusiness Portal managed by Pratt & Whitney of Connecticut (Id., lines 19-23). Note that this wireless tablet/Portal system combination allows for a field mechanic to have all of the advantages of broadband internet connectivity and collaboration support with customer and factory personnel, including, static picture, live video, voice-over-IP, touchscreen white board, and other PC functionalities in a mobile shop or field environment (Id., lines 23-29).

In an alternative embodiment, visual data device 32 consists of a stereo image lens marketed by Olympus America Inc., which provides a left eye-right eye double image (Id., line 30-32). The double image data is accessible by remote viewers via a host of electronic devices in communication with portal 12 including, but not limited to, three dimensional, stereo viewing devices, such as glasses, goggles, or the autostereographic viewing system now under development by the University of Strathclyde in Scotland

(page 8, line 32-page 9, line 3). Such a configuration allows for remote, 3D viewing of the live video image in a remote lab or location for in-depth analysis (page 9, lines 3-5). The remote 3D viewing permits natural three dimensional interpretation of the subject matter for significantly enhanced viewing and diagnostics by a remote person, and has broad applications in many other fields besides aerospace, including manufacturing, medical, surveillance, pharmaceutical, and other types of inspection activities (Id., lines 5-11).

Because the present invention provides two-way communication between a visual data device 32 and remotely located electronic devices used to view such data, viewers may issue control commands to the visual data device 32 based upon the visual data they receive (Id., lines 12-16). For example, a viewer using goggles 14 to view auto-stereoscopic data captured by a stereo image lens functioning as visual data device 32, may send a command instruction to alter the orientation of visual data device 32 (Id., lines 16-20). Such a command may cause the stereo image lens to alter its orientation by zooming in on an engine part or panning left or right about a deployed product (Id., lines 20-22). In this manner, remote viewers of visual data acquired by visual data device 32 may analyze visual data as well as direct the acquisition of such data (Id., lines 22-25).

Advantages of such a system include allowing multiple experts in different locations to quickly and effectively collaborate on an inspection of a turbine engine part, then make and document a decision that would either remove the

engine for overhaul or allow for continued operation (Id., lines 26-30). The savings in time and money would be significant, as presently a part requiring inspection would have to wait until the appropriate experts could physically travel to the site in order to perform the inspection (Id., lines 30-34).

While described in detail with respect to a stationary server 22 located, for example, in an aircraft hangar, the server 22 may in an alternative embodiment be located upon a moveable platform (page 10, lines 1-4). One advantage of locating server 22 on a moveable platform is to enhance the ability of system 10 to provide more flexible remote acquisition of data (Id., lines 4-6). For example, a moveable platform such as a helicopter could have installed upon it a server 22 in internet communication with portal 12 (Id., lines 6-9). The helicopter could be flown to a remote location and land amongst one or more deployed helicopters requiring diagnostic attention (Id., lines 9-11). Wireless LAN 24 is configured to encompass the area within which the helicopters reside (Id., lines 11-12). As a result, mechanics carrying mobile devices 26, such as PC tablets, connected to video borescopes can position the borescopes to gather visual data of, for example, the helicopter's engines (Id., lines 12-16). In this manner, remote viewers communicating with portal 12 can both receive the visual data collected by the borescope and issue control commands to interactively examine the engines (Id., lines 16-19).

CONCLUSION

An earnest and thorough attempt has been made by the undersigned to resolve the outstanding issues in this case and place the appeal brief in condition for consideration by the Board of Patent Appeals and Interferences. If the Patent Appeals Specialist has any questions or feels that a telephone or personal interview would be helpful in resolving any outstanding issues which remain in this application after consideration of this amendment, the Patent Appeals Specialist is courteously invited to telephone the undersigned and the same would be gratefully appreciated.

If any fees are required in connection with this case, it is respectfully requested that they also be charged to Deposit Account No. 21-0279.

Respectfully submitted,

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I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: "Mail Stop Appeal Brief - Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313" on August 21, 2006.

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